for newer systems that have not yet been designed, tested, manufactured, or distributed.

28. The API has reviewed the Consensus Plan submitted to the Commission on April 28, 1993 by the LMCC. API concurs with the UHF transition described in the LMCC Consensus Plan. Serious questions have been raised regarding the actual development and operation of 6.25 kHz equipment. Adoption of the LMCC UHF plan will permit much needed field tests of this equipment and regulatory review of the test results before 6.25 kHz channelization is mandated by the FCC.

29. Turning to the transition plan for the VHF band, there is virtually no evidence available to support adoption of the proposed 5 kHz channeling plan. Although 5 kHz equipment apparently will be available to populate the 220-222 MHz band, that equipment's design and the spectrual environment in which it is to be used are unique to the

channelization will not face any interference from an embedded channel plan and incompatible, "hostile" equipment. The exact opposite is true in the band 150-174 MHz where there already exist overwhelming congestion in many areas and a very large population of FM equipment.

30. The API has painstakingly reviewed options A and B described in the LMCC Consensus Plan. Acknowledging that both alternatives have their own unique disadvantages, the API urges the Commission to adopt the Option A plan that looks toward an initial transition to 12.5 kHz equipment on a voluntary basis until January 1, 2004 after which non-compliant systems could operate only on a non-interference basis. This option contains the same advantage as the UHF plan by permitting a review of the 6.25 kHz technology later in this decade.

31. The Commission's Notice does not consider equipment interoperability. The API urges the agency to address and resolve this very important issue. Many licensees of 800 MHz and 900 MHz systems have been frustrated with the inability to expand their initially-purchased systems with equipment manufactured by different vendors. The Commission is strongly urged to provide for a

minimum interoperability standard to facilitate true user choice in the marketplace.

32. The Commission's proposal to restrict transmitter power and antenna height, while not without some redeeming value, will unnecessarily escalate the cost and complexity of mobile radio systems employed in the petroleum and natural gas industries. Licensees with wide area systems based on antenna locations with high HAAT and suitable ERP to provide reliable communications with far-flung mobile units will be disadvantaged by the implementation of this proposed regulation in 1996. Many of these wide area systems are in rural areas where there is no serious channel congestion and, consequently, no requirement to enhance channel reusage. Since the API members are engaged in activities that rely on faultless communications and information to reduce hazards to life and property, it is essential that they continue to have the ability to operate such systems.

33. The net effect of the proposed ERP/HAAT limitation is to create systems that mimic cellular systems in intended coverage areas. However, many of the existing licensees have no intentions of operating radio systems as complex and sophisticated as cellular systems. Simple wide area systems

for rural applications, and trunked systems for dense applications are appropriate; these are two distinct applications. The rule proposed by the Commission simply cannot be applied across the board for all users in all geographic settings. It is necessary that reasonable accommodations be made for the oil and gas industries.

34. The LMCC Consensus Plan addresses some of these issues. Accordingly, API supports adoption of the type of "Safe Harbor" tables offered by LMCC, but not necessarily the values reflected in those tabulations. API's support of this "table" concept is conditioned on the explicit provision that the rules include a mechanism to accommodate users whose systems justify special consideration. The API opposes the adoption of any scheme that requires additional equipment expenditure for the sake of regulatory uniformity. However, the API is also concerned that the technical rules provide for a truly balanced system; that ERPs not be authorized at an excessive level that cannot possibly accommodate the necessary mobile talkback.

F. There Is a Continuing Requirement for Fixed Operations in the VHF and UHF Bands

35. The oil and natural gas industries employ many fixed point-to-point links that utilize narrowband VHF and conventional width UHF channel assignments. These links provide reliable single channel service for both radiotelephone service and for supervisory control and data acquisition ("SCADA") purposes. These SCADA systems are employed for remote monitoring of oil and gas wells, tank levels, and pipeline throughput. Systems operated for these purposes on UHF channels have been operated on a secondary basis to mobile service operations with only a few reported instances of interference that were disposed of promptly.

36. There is a continuing requirement for these fixed systems, and there are many areas where there are an insufficient number of assignments available to meet these needs. In light of the additional channels that would be created with even a limited implementation of the rechannelization contemplated in this proceeding, it is submitted that a portion of those channels should be dedicated for fixed point-to-point systems on a primary basis or, alternatively, dedicated primarily for point-to-

point applications in rural areas and mobile applications in urban environments.

37. Operational-fixed systems also would be impacted by the proposed ERP/HAAT limitation. These links, often used to provide critical data service to remote, temporary locations, employ highly directive, high gain antenna systems to ensure reliable communications. Rules that limit the amount of power/height eliminate this type of system setup and would adversely impact rural and offshore operations.

G. Insufficient Low Power Channels

38. The petroleum and natural gas industries are major users of low power equipment assigned the UHF 12.5 kHz offset assignments. These systems are used extensively in production environments, in and around refinery installations, and at pipeline compressor and pump stations. It appears to the API that an insufficient number of frequencies have been dedicated for low power applications. The API recommends that no rule change be adopted that will result in a net reduction in the number of low power channels now available in the Petroleum Radio Service. It further urges the Commission to structure the amended rules

so that at least 50% of the low power Business Radio Service channels shall remain dedicated for that use.

H. The Proposed Part 88 Provides Unsatisfactory Regulations for Geophysical Activities

39. At the conclusion of Docket No. 20036, the Commission codified rules to govern geophysical use of channels allocated to the Petroleum Radio Service.[5/] Those provisions are generally found in footnotes (3), (4), and (5) to the Petroleum Radio Service Table of Frequencies found at Section 90.65(b). Most of these provisions have been eliminated without explanation from the proposed Part 88. This treatment of a critical use of the spectrum employed to identify new energy sources is totally unsatisfactory. In an apparent effort to reduce the volume of its rules, the Commission is jeopardizing this nation's ability to locate and quantify new hydrocarbon resources.

40. Geophysical operations that use the radio spectrum are conducted both in the offshore and onshore environments. Maritime operations require the use of several radio channels for high speed data transmission (up to 9600 BPS in

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5/ Report and Order, 39 Fed. Reg. 40765 (November 20, 1974).

full UHF duplex mode) and for navigational purposes. A very high level of accuracy is necessary in these operations which necessitates data transmission of greater length than are otherwise generally permitted on mobile channels. It is for this reason that Footnote 4(i) to the Petroleum Radio Service Frequency Table permits non-voice transmissions of up to 3 minutes.

41. For land operations, a vibroseis energy source is currently the typical choice. Geophones detect the seismic signals transmitted by several vibrators that are typically spread over an area about 2 miles wide and 12-15 miles in length. The signal is a swept signal or a coded signal lasting 12 to 16 seconds with a listening period of 20 to 24 seconds. At the end of each sweep, the vibrators move about 2 meters and set up again to do the next sweep. This process means that a recording is taken at approximately 25-second intervals and this signal is captured on about 4096 data channels. There is a large amount of data being transferred by RF link from the vibrator trucks to the recorder and vice versa for quality/control, safety and synchronizing purposes. Since the data radios are used to start the vibrators, the timing must be accurate within 1 Ms.

42. Geophysical crews still require a small block of frequencies reserved for geophysical use on a non-exclusive basis. When multiple geophysical crews are operating in the same area, they are forced to time share frequency assignments since the seismic signals generated on either marine or land operations prevent other crews from operating within 50 miles of the site. With this fact and the relatively short range required for communications, the interference between crews is minimal. All the narrow band technologies have been tried by the major contractors and oil companies with no success. In view of these considerations, it is respectfully submitted that the public interest mandates that the Commission continue to accommodate without compromise these critical geophysical operations now covered by Footnotes (3), (4), and (5) to the Petroleum Radio Service Frequency Table.

I. Part 88 Should Include Provisions for Electronic Application Filing and Other Modified Licensing Procedures

43. API member companies have been active participants in efforts designed to demonstrate the efficiencies available with electronic application filing through the use of electronic data interchange (EDI) transaction sets. API is encouraged that the Commission has awarded a contract for

an electronic application filing feasibility study. The Commission is encouraged to include in its ultimate application EDI process provisions to accommodate the electronic transmittal of all supplemental engineering and narrative statements related to the application's consideration. It also applauds the recent announcement that the existing rules concerning signatures have been amended to accommodate the electronic filing of applications. It is also understood that discussions are underway between Commission personnel and representatives of its lockbox bank that look toward a fee payment system that would also accommodate electronic filings. API strongly recommends that Part 88 provisions be designed to not only facilitate, but encourage electronic application filing.

44. Extension of the license term from five years to ten years could substantially reduce the renewal burden now imposed on both the Commission and licensees. Section 307(c) of the Communications Act of 1934, as amended, permits such a change in the rule making process. A disadvantage to such a change may be the agency's inability to purge the license data base on the current rolling five-year basis. Other steps that could be taken to reduce the frequent license renewal burden include a bulk

and/or elimination of the present policy that requires that a separate check accompany each application. API strongly recommends that the Commission grant licensees relief from the current onerous renewal process.

45. The API opposes adoption of the proposed Section 88.103(d) that would permit only an abbreviated period of 30 days for most applicants to resubmit to the Commission applications returned for correction. The present 60-day period is frequently insufficient time to complete FAA notifications, coordinate with other users, or verify critical information. Adoption of the proposed change would visit an unnecessary injustice on many applicants with no known commensurate benefit.

46. The Commission has proposed in Sections 88.87(c)(3) and 88.87(f) to require notification within 30 days of any

> Change in the number and location of station control points or of control stations operating below 470 or above 800 MHz meeting the requirements of § 88.67(a)(2).

Inasmuch as the current requirement is to list on the Form 574 only the "primary control point," API recommends that Section 88.87(c)(3) requires notification only for a

> Change in the location or telephone number of the primary station control point, or number and location of control stations operating below 470 MHz or above 800 MHz meeting the requirements of Section 88.67(a)(2)."

47. The API is concerned that the proposed Part 88 would curtail the use of the Conditional Temporary Authority ("CTA") for operations below 150 MHz. Provided that applications have been fully coordinated, and barring some unknown rationale, the CTA option should continue to be available for operations below 470 MHz.

48. Notwithstanding the General Grandfathering Provisions of proposed Section 88.1551, there is concern that existing mobile relay operations in the band 150-174 MHz may be jeopardized in this proceeding because of EUO concurrence required by Section 88.473. Petroleum and natural gas industry licensees rely heavily on VHF mobile relay systems for exploration, production, and pipeline activities. In view of the uncertainties posed by this proceeding, the API cannot over emphasize the necessity for uninterrupted use of this operational mode. It is essential

that existing Petroleum Radio Service mobile relay stations receive full, indefinite grandfather privileges.

49. Finally, it is highly recommended that the Commission carefully review the licensing transition process to minimize the burden on itself and licensees of reflecting new center channels and emission designators. Dependent upon the outcome of this matter, renewal applications may require revision to provide a streamlined renewal process that still accommodates the changes mandated by a refarming Report and Order.

J. Enforcement of Tower Marking Should Reside at FAA

50. The API realizes that the Communications Act of 1934, as amended, grants the Commission authority to require the painting and/or illumination of antenna towers. It realizes that this is probably not the forum in which to raise this issue. Even though the proposed Section 88.993 concerning Station Records was apparently omitted, a general comment is in order concerning recordkeeping for tower lights. During some periods, the off-line review of applications for tower marking specifications has caused extended processing delays. Moreover, the recent practice of citing multiple licensees using the same structure with

painting and lighting violations is, at least, aggravating and, at worst, a subterfuge for producing revenue for the U.S. Treasury. Since the purpose of the tower marking is to aid air navigation, API respectfully submits that the functions should be transferred to the Federal Aviation Administration.

III. CONCLUSION

51. The API supports a consolidation of the existing 19 radio services into a smaller number of categories or pools. It strongly urges the Commission to include the petroleum and natural gas industries in a pool with users who have similar disciplines, operating objectives, and public responsibilities -- principally those licensees charged with the type of safety considerations that accompany the operation of manufacturing and right-of-way facilities, such as refineries, pipelines, railroads, and electric, gas, and water transmission and distribution systems. Many of these users are required by other federal regulations to provide redundant or highly reliable communications to support their operations. Accordingly, they must be provided some special consideration to properly discharge these additional responsibilities. Establishment of such a category or pool may also facilitate the

Commission's resolution of some of the other difficult issues addressed in this proceeding such as limiting antenna height above average terrain ("HAAT") and transmitter effective radiated power ("ERP").

52. The proposed Exclusive Use Overlay (EUO) concept is one that deserves implementation in a restructured spectrum environment. The concept of EUO must be refined, however, so that it includes provisions for systems that cover small areas such as refineries, as well as those employed along pipeline right-of-ways that may extend for several thousand miles. The EUO concept cannot be based solely on mobile loading. It must also take into consideration other factors that demand exclusivity for those licensees charged with protecting the public's health and safety.

53. The Commission is urged to establish clear and concise criteria for frequency coordination certification. The API supports continued use of the advisory opinions of these entities. All coordinators should, at the earliest date possible, be required to adopt a common data base schema and to initiate further steps necessary to provide for electronic application filing. The Commission is urged to facilitate the additional rule and policy changes

necessary to secure the advantages available from the unimpeded use of electronic technology.

54. The API supports restructuring both the UHF and VHF bands with the implementation of 12.5 kHz channelization

pooling arrangements under examination in this proceeding, and to address the type of licensing and operational provisions that will be required in any further sharing environment, the API strongly urges the Commission to seek further comments in this proceeding following the establishment of the pools so that these important issues can be addressed in an organized and rational manner. Otherwise, it is feared that the Commission faces the strong prospect of having to deal with numerous Petitions for Reconsideration or subsequent Petitions for Rule Making to re-address issues that should be disposed of in this proceeding.

WHEREFORE, THE PREMISES CONSIDERED, the American Petroleum Institute respectfully submits the foregoing

proceed in this matter in a manner fully consistent with the views expressed herein.

Respectfully submitted

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